IN THE CLAIMS

1. (Previously Presented) A method comprising:

receiving a frame having a source identifier field corresponding to a source node and a destination identifier field corresponding to a destination node, the frame having been transmitted to a fibre channel network switch through a plurality of switches including a first intermediate switch between the network switch and the source node;

characterizing traffic flow at the network switch, wherein characterizing traffic flow comprises determining an amount of congestion control needed in a fibre channel fabric, wherein if a moderate amount of congestion control is needed, a first instruction is generated and if a significant amount of congestion control is needed, a second instruction is generated; and

wherein the first instruction, having a source identifier field corresponding to the destination node and a destination identifier field corresponding to the source node, reduces transmissions only at the first intermediate switch and the second instruction reduces transmissions at a plurality of switches including the first intermediate switch.

2. (Original) The method of claim 1, wherein the first intermediate switch is an edge switch coupled to the source node.

3. (Previously Presented) The method of claim 2, wherein the first instruction is sent to the first intermediate switch and comprises an edge quench frame.

4. (Canceled)

5. (Currently Amended) The method of claim 3,~~claim 4,~~ wherein the edge quench frame includes network switch congestion information.

6. (Previously Presented) The method of claim 5, wherein the edge quench frame includes network switch queue level information that indicates whether an optimal queue level has been exceeded.

7. (Original) The method of claim 6, wherein the edge quench frame directs the first intermediate switch to control the allowed rate for transmitting from the source node and the destination node by half.

8. (Original) The method of claim 7, wherein the first intermediate switch and the network switch are connected using fibre channel.

9. (Original) The method of claim 1, wherein the frame was transmitted through a second intermediate switch between the first intermediate switch and the network switch.

10. (Previously Presented) The method of claim 9, further comprising:

sending the second instruction from the network to the second intermediate switch to control traffic from the source node to the destination node.

11. (Canceled)

12. (Currently Amended) The method of claim 10,~~claim 11,~~ wherein the second instruction sent to the second intermediate switch comprises the path quench frame.

13. (Original) The method of claim 12, wherein the path quench frame has a source identifier field corresponding to the destination node and a destination identifier field corresponding to the source node.

14. (Original) The method of claim 13, wherein the path quench frame includes network switch congestion information.

15. (Original) The method of claim 14, wherein the path quench frame includes network switch queue level information.

16. (Original) The method of claim 15, wherein the path quench frame directs the first and second intermediate switches to reduce the allowed rate for transmitting from the source node and the destination node to 0bps.

17. (Original) The method of claim 1, wherein characterizing traffic flow comprises checking the network switch queue level.

18. (Canceled)

19. (Currently Amended) The method of claim 1,~~claim 18,~~ wherein path quench frames are transmitted when the queue level exceeds a high threshold.

20. (Original) The method of claim 19, wherein edge quench frames are transmitted when the queue level is between a high threshold and a low threshold.

21. (Original) The method of claim 20, wherein the edge quench and path quench frames include a buffer level indicator.

22-62. (Canceled)

63. (Previously Presented) An apparatus, comprising:

means for receiving a frame having a source identifier field corresponding to a source node and a destination identifier field corresponding to a destination node, the frame having been transmitted to a fibre channel network switch through a plurality of switches including a first intermediate switch between the network switch and the source node;

means for characterizing traffic flow at the network switch, wherein characterizing traffic flow comprises determining an amount of congestion control needed in a fibre channel fabric, wherein if a moderate amount of congestion control is needed, a first instruction is generated and if a significant amount of congestion control is needed, a second instruction is generated; and

wherein the first instruction, having a source identifier field corresponding to the destination node and a destination identifier field corresponding to the source node, reduces transmissions at the first intermediate switch and the second instruction reduces transmissions at a plurality of switches including the first intermediate switch.

64. (Original) The apparatus of claim 63, wherein the first intermediate switch is an edge switch coupled to the source node.

65. (Previously Presented) The apparatus of claim 64, wherein the first instruction is sent to the first intermediate switch and comprises an edge quench frame.

66. (Original) The apparatus of claim 65, wherein the edge quench frame has a source identifier field corresponding to the destination node and a destination identifier field corresponding to the source node.

67. (Previously Presented) A computer readable medium having computer code embodied therein, the computer readable medium comprising:

computer code for receiving a frame having a source identifier field corresponding to a source node and a destination identifier field corresponding to a destination node, the frame having been transmitted to a fibre channel network switch through a plurality of switches including a first intermediate switch between the network switch and the source node;

computer code for characterizing traffic flow at the network switch, wherein characterizing traffic flow comprises determining an amount of congestion control needed in a fibre channel fabric, wherein if a moderate amount of congestion control is needed, a first instruction is generated and if a significant amount of congestion control is needed, a second instruction is generated; and

wherein the first instruction, having a source identifier field corresponding to the destination node and a destination identifier field corresponding to the source node, reduces transmissions at the first intermediate switch and the second instruction reduces transmissions at a plurality of switches including the first intermediate switch.

68. (Original) The computer readable medium of claim 67, wherein the first intermediate switch is an edge switch coupled to the source node.

69. (Previously Presented) The computer readable medium of claim 68, wherein the first instruction is sent to the first intermediate switch and comprises an edge quench frame.

70. (Previously Presented) A system, comprising:

an interface operable to receive a fibre channel frame from a source node, the frame transmitted through a plurality of fibre channel switches including an edge switch connected to the source node;

a processor operable to characterize traffic flow and determine buffers levels at the interface, wherein buffer levels exceeding a high threshold triggers the generation of a path quench frame that is sent to the plurality of fibre channel switches including the edge switch to limit traffic flow to the interface and wherein buffer levels between a low threshold and a high threshold triggers the generation of an edge quench frame that is sent to the edge switch to reduce traffic flow to the interface from the edge switch,

wherein the edge quench frame has a source identifier field corresponding to the system and a destination identifier field corresponding to the source node.

71. (Previously Presented) The system of claim 70, wherein the path quench frame instructs the plurality of fibre channel switches including the edge switch to cease transmission of any fibre channel frames to the interface.

72. (Previously Presented) The system of claim 71, wherein the edge quench frame instructs the edge switch to reduce transmission of fibre channel frames to the interface.